

CLAIMS

1. A flame hydrolysis process for the manufacture of glass bodies of doped silica glass, wherein a first formed glass body is generated on a target by flame hydrolysis using a single burner into which fuel and precursors are fed for generating the doped silica glass, wherein a dopant is used that comprises at least one component selected from the group formed by titanium, fluorine, germanium, vanadium, chromium, aluminum, zirconium, iron, zinc, tantalum, boron, phosphorus, niobium, lead, hafnium, molybdenum and tungsten, and wherein said first formed glass body is subsequently reheated in a mold to a temperature above the glass transition temperature for reshaping the first formed glass body into a second formed body having a larger breadth and a smaller height than said first formed glass body.

2. A flame hydrolysis process for the manufacture of glass bodies of doped silica glass, wherein a first formed glass body is formed on a target by flame hydrolysis using a single burner into which fuel and precursors are fed for generating the doped silica glass.

3. The process of claim 2, wherein a dopant is used that comprises at least one component selected from the group formed by titanium, fluorine, germanium, vanadium, chromium, aluminum, zirconium, iron, zinc, tantalum, boron, phosphorus, niobium, lead, hafnium, molybdenum and tungsten.

4. The process of claim 2, wherein said first formed glass body is subsequently reheated in a mold to a temperature above the glass transition temperature for reshaping the first formed glass body into a second formed body having a larger breadth and a smaller height than said first formed glass body.

5. The process of claim 2, wherein said precursors fed into said burner are selected to yield a dopant concentration in said first formed glass body of at least 0.1 wt.-%.

6. The process of claim 2, wherein said precursors fed into said burner are selected to yield a dopant concentration in said first formed glass body of at least 0.5 wt.-%.

7. The process of claim 1, wherein said precursors fed into said burner are selected to yield a dopant concentration in said first formed glass body of at least 1 wt.-%.

8. The process of claim 1, wherein said dopant comprises at least 0.005 wt.-% of fluorine.

9. The process of claim 1, wherein said dopant comprises at least 0.01 wt.-% of fluorine.

10. The process of claim 1, wherein said target is rotatably driven while said first formed glass body is formed.

11. The process of claim 10, wherein there is a distance between said first formed glass body and said burner that is kept substantially constant during generation of said first formed glass body.

12. The process of claim 10, wherein said target is arranged substantially horizontally and said first formed glass body is grown substantially in a vertical direction.

13. The process of claim 10, wherein said target is arranged substantially vertically and said first formed glass body is grown substantially in a horizontal direction.

14. The process of claim 2, wherein a disk comprising silica glass is used as the target.

15. The process of claim 1, wherein a disk comprising doped silica glass is used as the target.

16. The process of claim 1, wherein said reshaping step is followed by at least one further reshaping step.

17. A glass body of doped silica glass comprising striae having thicknesses of # 70 micrometers.

18. The glass body of claim 17, wherein said striae have thicknesses of # 40 micrometers.

19. The glass body of claim 17, wherein said striae have thicknesses of # 20 micrometers.

20. The glass body of claim 17, wherein said striae have thicknesses of # 15 micrometers.

21. A glass body of doped silica glass comprising defects, said defects having a defect density of no more than 50 defects per square centimeter, with a given defect detection sensitivity for defects of at least 200 nanometers diameter.

22. The glass body of claim 21, wherein the defect density is no more than 25 defects per square centimeter.

23. The glass body of claim 21, wherein the defect density is no more than 10 defects per square centimeter.

24. The glass body of claim 19, further comprising defects, said defects having a defect density of no more than 25 defects per square centimeter, with a given defect detection sensitivity for defects of at least 200 nanometers diameter.

25. An EUV lithography component comprising a glass body according to claim 24.